

**UNIVERSITY OF MASSACHUSETTS LOWELL
CENTER FOR LOWELL HISTORY
ORAL HISTORY COLLECTION**

**SHIFTING GEARS PROJECT
LAWRENCE**

**INFORMANT: EDWIN BUTHMAN
INTERVIEWER: YILDEREY ERDENER
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**E = EDWIN
Y = YILDEREY**

SF-LA-T521

E: Well the Pemberton Mill, many people worked in it and it collapsed killing a lot of people. And then, then it had collapsed. Then it set fire. The fire killed as many people as the collapsed really. It was a very (--) There's a whole cemetery lot in the cemetery where the victims are buried.

Y: Well which cemetery is this?

E: [Sneezes] Excuse me.

Y: I'm at Edwin Buthman's house. Today is October 7th, 1988, Friday. Tis um, 11:20. And uh, it was in 1860 the Pemberton?

E: This? I don't know, but it's in every book.

Y: Yeah, I know. I know that. I think uh (--)

E: It could be.

Y: What is this here?

E: They discovered the cause of the collapsed was imperfect post that held up each floor. And this post, I, I, I've had the original in my possession. I copied it and put it on wood, just to show (--) See, this should be even all the way around. But it's weak here, and it only, a post is only as strong as it's weakest point. And this was made wrong. Imperfect workmanship. And that caused the whole mill to collapsed.

Y: Yeah, it says 1860.

E: Oh, all right. Good. Just what you said.

Y: Yeah, it's interesting.

E: So I copied it, but I used to have the original. Now we gave it to the Textile, the Textile Museum. Now this would be kind of helta skelta, but it just gives you an idea of what is in, in position here. (Y: Yeah) Oh, this is here. They tell a few jokes about, well, [few words unclear]. Now this is the, this is the flood. This is the river. Drops twenty, thirty feet. But this in the flood, it was turned up to here. See that's, that's the flood fall. (Y: Yeah, it was in?) '36.

Y: '36, 1936. Yeah.

E: And then they, there was a bridge running parallel to this Fall's Bridge. It was called the Fall's, and the Fall's Bridge. (Y: Umhm) And there was a railroad bridge, and they took big railroad cars full of coal, and put them on the bridge so the wind, or the water wouldn't, so the water wouldn't wash the bridge over. So they put heavy trucks of coal on it. It's quite a history, some of the books will tell you if you need them. It's quite a history of the books, of the uh, of the bridges. A couple of them burned. And there was kind of a, had trouble with bridges, they were in serious trouble at the time. So uh, now there's another idea. See, there's the bridge, the Fall's Bridge, and there's the Falls, but it's way up to here.

Y: It says March 1936.

E: Oh yeah, '36, okay. That's nothing. That's my friends home in the next door. He was a lawyer. Oh, these were part of an exhibit I had. I made an exhibit for the city of Lawrence. And it's a little disheveled now. That was the Lawrence Common. No, here. Okay. Jackson Street. At the foot of Jackson Street they had these, they sort of took care of the soldiers. But (--)

Y: What is the difference between French drawing and English drawing. These are two different processes?

E: Yeah, it's a different process. Similar to begin with, but there's a different way of uh, well I can't go into all of that. But they call them, they spin on a mule, what they call a mule. It's a big, big frame from here to the next partition, and it runs on wheels. [Chuckles] And I don't think it shows, but it goes back and forth. And as it's going back it spins. And then when it comes back it wraps it up on the thing. See, like if you took and spin it, well that spins it in mid-air. Now see, it goes through here. That's been going through the drawing room already. And then it comes through these rolls, and these rolls are coming faster. And then they spin it, and then they wind it up, see. That was my first job. Taking the bobbins [unclear]

Y: Spinning? Spinning room? (E: What?) Spinning room?

E: Spinning. This is, this is, any of it's spinning. Oh see? They're showing the French, it's different. It doesn't have to go through so much. But they're shorter, and they're not so, not as strong. They're more inexpensive.

Y: Let's see, yesterday we talked about, how, how important was your job to you? I mean um, that's a silly question, but uh, (E: no it isn't) I mean when you were working at the mill as um (--)

E: My life was in the dye house. Since I was, well fourteen I went office boy, and sixteen I went to work in the dye house. [Sneezes] Excuse me. Dye house office.

Y: Yeah. Are you catching cold, or what? (E: what?) Are you catching cold? I hope not.

E: No, I get, I don't know whether to call it a cold or not. I get these at times. I think I might have a little hay fever. I don't know. But anyway.

Y: So you started (--)

E: I really lived my dye, my work. It was in it, and I was, by the time I was twenty I was in a responsible position. I had quite a few people working for me, you know, because the people were going to war. It wasn't that I was so intelligent, or anything, but it's just, I was willing to work and learn fast. Learn as much as I could. And I, I loved my work. I was vitally interested. We had hundreds of barrels of dyestuff come in. I'd go around as a kid, put them all in a book. The name of the dye and who produced it, you know? And as a kid, well a kid, I might have eighteen, sixteen, seventeen years, eighteen years old. I go to Boston to important chemistry meetings, and dyeing meetings. And I'd meet all these old boys, and I'd ask them all kinds of questions. And lots of things they didn't understand, but I found that those things were so hard and difficult for me to learn, I learned them better than anything else after I got through. I realized that I had to learn them. So I kept plugging at them. And I learned the difficult things better than the simple things after awhile. You know, because I, I really plugged at it. And I asked these old guys a lot of questions, they'd been in it for all their life. And they were interested to see a young fellow asking questions. It was good for them, it was good for me. So, so I was interested in dyeing all the way. I loved the colors, and it was some satisfaction for a dyer. You go through a long floor, a long room, where they're perching. Perchers, why they'd be 100's of feet long. You know, and maybe forty, forty perchers perching. And it took quite an area. But you get a thrill, a satisfaction of having dyed them. And then on shade, and good. You can walk along there and put your hand on them.

Y: Perching is, what is perching?

E: Perching is inspection.

Y: Oh yeah. (E: Put them over, that's, that's perching) Yeah, right. Yeah.

E: I don't know where the word comes from, but you go through that room and you have beautiful colors. Reds, and blues, and greens, and every kind of a color. And you dyed them. You have that satisfaction, and they're okay! You know, you can have troubles. Sometimes the thing don't come out the way it should. But here a whole room full of good stuff. And you were the dyer. You decided what dye you'd use, and you got it on shade. And here they are? And there's satisfactory. You know, life is that way. You build on what you've done good. You have

a lot of things. It holds you, what holds you up sometime? The things you've done well. It holds you out when you get troubles. The good things hold you up. Well I was way off. My mind gets way off. But I was thinking now, for instance, a person, a married couple, they may separate, or they may die one of them. Well you have children. You see, you have something left of build on. You have some satisfaction, and you build your life on what's there, and what's steady, and what's good.

Y: Yeah. So it gave you good satisfaction that you (--)

E: Satisfaction, night and day. And I would be called. They'd call me up at midnight. [Few words unclear] You know, something happened in the dye house. See, we ran, we ran practically twenty-four hours a day, you know, in the dye house. And I had different men working for me. Shifts, different shifts. And sometime they'd have trouble. And I have to go in and fix it up. But it wasn't all that easy. Rather, somebody would never know how to solve it. But you, everybody had the same trouble. You know, you all had, and other times there was times where everything would go great, and other times you were in trouble. Well somebody else was in trouble too. So every time you learned something, you put them in these books. I did. It was my own personal. And I had trouble, oh, I had that before, now what did I do? And I'd go back and find out what I did. And uh, but anyway. I was, in a way I was lucky. I worked, what did I do? I worked for the American Woolen many many years. And then I worked in the plastic industry fifteen years. I only had two employees in my life. And I lived to 87. So I, I was never fired or anything like that. I kept my job all these years. I never got a lot of money. Not enough.

Y: Was the job (--) I mean you said you had a very nice wife. Was uh, did you, was your job more important somehow, sometime when it was an emergency, or when it was um (--)

E: Oh I don't know. I think I could do certain things and take certain troubles, because I had a good wife to sustain me like. You know there was some satisfaction here. A good foundation like, or a good permeated influence. It'd give you, it gave you help like a companion. That's what, I think God realized man alone was kind of furlong and lost. Gave me a companion. And I think that's the relationship.

Y: Yeah. After you became head of the dye house, when was that? How old were you?

E: I was probably about twenty-three, twenty-four years old.

Y: Did you, did you fell important? You were an important person.

E: I never felt important. I never felt elated with importance, you know?

Y: But you were actually. I mean uh (--)

E: Well actually I was. When I look at it sometime I think, well I was. I had like a hundred men, night and day, twenty-four hours a day. And I had to deal, you know, dealing with men was important as dyeing it, you know, the different personalities. I know when it was hot I'd go

out and buy lemonade. And I, just to keep them working. It was selfish in a way. But I had to keep them working. They'd walk out because it was too hot. So I'd give them lemonade and try to do nice things for them, and try to keep friendly. And so I had a lot of satisfaction, but it was a trying job. (Y: Yeah) It was a trying job. Some time your shade wouldn't come out right. It would bother you. You couldn't sleep right. Not that bad, but bad enough. Enough to worry you. But I must say, I had good health, because I think almost all my life I started work at six o'clock you might say. You know, the dye house. And it was one problem after another. And I worked for years. And then that way, and then I had a boy scout troop of eighty boys besides, nights. And I had classes up here nights, all winter. Astronomy and art, and all kinds of things. And I must say I had fairly good health.

Y: Yeah, this satisfaction, uh, did you get the same feeling when you worked for Bolta Company, what was the name? The um (--)

E: Yes, I guess so. It was new to me. I had some, I had a lot of, I had a life of experience on dyeing color, so it was, I felt comfortable in it. I felt as though I was ejected into a situation that, they respected me too. Well they knew I knew the boss. That helped. And we were friends.

Y: Yeah. But was, it was not probably the same kind of fulfillment. So, (--)

E: No, no. Because I wasn't, I, well what did I say. I had charge of the color. I did have color, if I wanted color. You see in the plastic industry you saved with the color you had left. You know, you saved it. And the next time you might have another run the same thing. You used this half a barrel you had left. Like that. It was my job like that. And well, anyway, you wouldn't want to go into all those details.

Y: No, I would like to know that you, what was your job in Bolta? Bolta is the name?

E: Bolter.

Y: Yeah, what did you do there?

E: Well I had charge of the color application. We made plastic for furniture. And we made it for all the automobile industry. Ford and all of that, and I had certain colors to match, and I had to match the colors together. We had laboratories, and we had chemists working with us. We could do it on a small basis and then apply it to a machine. And then the Bolter Company, it was different than a dye house. You would run a yard of this cloth to see what the shade was. If it wasn't right, you'd fix it. And then finally when it was okay, you'd run the whole thousand yards maybe. Different than the dye house. You couldn't do that in the dye house. You put all the dye in it and you wouldn't know until it was all done, all boiled and everything. But then you'd have to know how to apply corrective color to make this, make it up to shade. And you had to know certain colors that would go on evenly, and not, cloudy they call it. Whatever you call it. But (--)

Y: So in a way um, you were more or less in the color, color uh, I mean (--)

E: I was in the color all the way.

Y: Yeah, in the Wood Mill, or Ayer Mill, and then later in Bolter.

E: In all color, different. One was Textiles, and the other was plastic.

Y: Plastic, yeah. (E: Yeah) And uh(--)

E: But it was always in a supervisory capacity. It always was a supervisor. I had to make the colors, and well my life was color. And I like it.

Y: Yeah, you are a colorful person. (E: Yeah) [Both chuckle] Did you, as a supervisor did you recognize the accomplishment of men and women working under you? I mean did you give them kind of compliments, and uh (--)

E: I was not an aristocratic supervisor. I was, I never lost the common touch you might say. I, I liked the men. I liked to work with them. They were my friends. I was the boss of course, but I never felt better, or superior. I, I tried to. I made a lot of friend, and I still have friends today. I go on the street today, and people know me. You know, I was the dyer. But it's been a satisfaction. I (--)

Y: What about commitment? Did you feel loyal committed to American Woolen Company? Or later Bolter.?

E: I don't know. I just, I think it was in myself. I don't mean that in an arrogant way, but I, I was not lazy. I always was looking for something better, you know, in the sense of getting a better car, a cheaper car, or more economical, or a better way of doing it. And I was interested in new things, and to learn. I always had, I think I had a complex that, I said I went to work when I was fourteen. I didn't have any high school education. I didn't have any college, so I felt I have to work. I have to make up. I have that feeling as though I'm not able. I'm not equal to. [Sneezes] Excuse me.

Y: That's all right. [Unclear]

E: I'm not equal to all these other high school, or graduates, or like that. (Y: Yeah) I had a feeling that I was inferior. So I, I kept working. I worked all the time and then I, I took a course in English. I took a course in [Mycosopy?], in Tech School in Boston. (Y: Umhm) And I went to Lowell Textile ten years maybe, Chemistry and Dyeing, and Management. I always was going to school to make up what I didn't get when I went to work at fourteen. You see? So I never felt as though I was better, or arrogant, or superior. I didn't feel that way. I always felt, I didn't want to be found out how ignorant I was.

Y: Well it's not true.

E: Well it's not true.

Y: Well what about the other one, other ones, other supervisors? Did they uh, were they nice to the (--)

E: Oh yeah, we got along pretty well. They got along. They were similarly brought up. They went to Lowell Textile School like I did.

Y: You said you did not have children. But if you had, would you encourage them to work in a Textile Mill, or um, (--) Or in both (--)

E: Well I, I wouldn't thrust my feelings on them. Let them feel their own. You know, let them (--) I would help them if they needed it, but I wouldn't necessarily be a dyer. It wasn't the most comfortable job in the world. You couldn't, you didn't leave at five o'clock at night every night. You had to finish your color, make it right. It may not be coming out right. You had a date. I was, you know, was a Scout Master, I was a Sunday school teacher. I was in, active in a lot of things.

Y: So you worked more than eight hours sometimes?

E: I hardly ever worked eight hours. It was long hours, you know, the dye house ran twenty-four hours a day. And so I was always involved with (--) I didn't have any break-off, like five o'clock, or come in at this hour or that.

Y: Did they pay overtime?

E: No, not to the, not to the superiors.

Y: Boss, yeah.

E: No, we worked for nothing. You see, we didn't get any of the extra. The help got time and a half.

Y: The workers? (E: Yup) Yeah.

E: You work an hour over, they get an hour and a half pay.

Y: Umhm.

E: We didn't.

Y: Yeah. And was dyeing a man's job? I mean women worked also with you?

E: Substantially yes. Almost all my, all my help except the office were, were men. (Y: Men) Yeah, all men.

Y: Why, you think women (--)

E: I don't know, but the dye house was a dirty job. You wore clothes, and you had to dip the dye by hand, out of pail, a little barrel into a kettle that was splashing dye all over you. And uh, it was, well things have changed. I don't know, but I think of those things. And things have really changed, you know? In the old days the men had to build the stone walls to clear the fields. Today women don't have to make stone walls. They press buttons. Not entirely, but substantially you're talking about change made a difference. Men, you had to be strong to build stone walls, and they had to plow the field. Today I guess the women plow the fields too. But in those days you can see where men, at least I do, [unclear] those things, but I can see where men were regarded as sort of superior. They were the bread winner, and they had to do the hard work, and (--) But today there isn't so much manual work as there used to be. Even digging a grave. Look at the nice little diggers you have, mechanical. (Y: Yeah) In the old days you'd have a half a dozen men shoveling, digging it out. (Y: Yeah) It's the way with everything.

Y: Yeah. You said about 100 people were working?

E: About 100 people in my house, in my dye house.

Y: And ethnically were the Italians dominant, or Germans, or English, or? I guess the Italians were in my department, were more, as I remember it. Let me see. Italian and Polish. There weren't so many Germans. Germans, not because I'm German, but I think that Germans were a little superior in their, in their (Y: Profession? In the Textile?) In their profession. Now for instance, Germans were weavers. It took more brains, more know how, to run a loom than it did to take, empty a dye kettle, or load a dye kettle. It required a little higher intelligence, a little more experience, I think.

Y: Yeah. And other ethnic, other nationalities like Scotch, Scotch people, they were engineers I heard. Italians were mulers. Is it right? (E: What were?) Mulers? Italian people usually worked as spinners, or as (--)

E: Could be. Well no, no, no. There I'd say, well it could be, but the spinning was another thing. It wasn't like a dirty dye house. There was no great barrier between the two. The uh, a spinner, they could be Scotch or German, or who else. There wasn't any (--)

Y: Yeah. If you uh, put those different jobs in uh, from high to low, I don't know if you could do that, but if would, which job was the most prestigious besides the uh, second hands and supervisors and so forth, as workers? Menders, or weavers, or which one first?

E: Well I don't know really. I'm no expert on that, but (Y: I mean just an) I think, I'm feeling that a weaver would be on the top there. No, well they would be mechanics. You know, mechanics weren't, they were, they had to make machinery, and like that. I suppose mechanics would had needed much know how as a weaver. I think that would be true. And then, and that's the way it was in the Textile. A weaver was on a much higher level. A level in intelligent and in pay. They had to, it took, you didn't take the nondescript worker out of the street and make him a weaver. You had to be trained to be a weaver. You had all the experience. And you were responsible for, you were responsible for your loom. You were getting, in the old days you were

fined. You were brought up before the percher. You know, they examined your cloth when it was finished, and you could have a lot of, you might have misses a thread all the way through eighty yards, there maybe a thread missing. And you should have seen it. But you wove the whole eighty yards. Of course there are disinterested people that are not interested in their job, they don't like it, they just do it because they get the money. Uh, and they, they would make, and that carelessness applied to the cloth they were weaving. It would be a careless piece of cloth you might say. (Y: Yeah)

Side I ends
Side II begins.

Y: I understand also menders were good.

E: I, I didn't finish, you know. I, I was, had a problem in my mind. Menders, or weavers, quite a different class, but probably, they required a know how, and yet there's different classes of menders. See, there are finished menders. You might have an imperfection in a piece of cloth that had threads, or whatever it was in it, a design. And every mender couldn't fix that defect. A good mender, in fact they advertised in the paper menders, for this mender. You have this, a moth eaten cloth, they come in and they could weave, you might say, with a thread, all the threads back, and then this way. It was quite a skill. And so I suppose we, mending, finished mending like that, the degree of the kind of mending was very vast. It was very, some might be just mending a little thread missing. Now anybody could do that. But even that took a little more intelligence than unloading a dye kettle, or spinning, hundreds of spinning to take out the finished bobbins and put in some new ones to be spun. That wouldn't be as much as a mender. Now I suppose mending could be, oh, it's so, it's so different. One is a machine, and the other isn't. Pretty hard to compare the two. But I suppose knowledge in mending, it was a higher class anyway. It was really a higher class, both of them. And as I say, your machine shop, a good machinist in the machine shop, they would require some different knowledge. And then there's what they call a Mill Wright. (Y: Mill Wright) A Mill Wright.

Y: Write, like W R I T E?

E: I don't know. I overheard the word Mill Wright, I don't know. But they could fix a belt, although they had belt departments. they had a belt department. The boss of the belts, of the factory, he would sort of fix belts, and mend them. You know, he was a belt man, a belt man he was called. And, And, now gears, see, I'm, they probably would buy gears today, maybe when (-) But they made gears on the lathe, and that would take some skill. You need some training and schooling. So I don't, I guess a good machinist would be certainly equal to a weaver easily I would think. Maybe a little better in some variations of it.

Y: Right.

E: You want to sit down in the chair?

Y: No, no, I want to see you while I talk to you.

E: Yeah. Yeah.

Y: Um, so the good mechanic would be on the top, and I mean we are just trying to play around, you know? And then the weaver, weaver, and the mender maybe together at the same time. And then down to uh, what would come after? You said the belt man would come?

E: Well I wouldn't, I wouldn't put that in somewhere. It's such an insignificant (--) It's the part of the mechanics work in a sense.

Y: Yeah.

E: [long pause] Well, and there's wool scouring. Sort of a menial job. The dirty wool, and you have to have some knowledge of soap, and cleaning. But it, we're thinking more weaving and mending are different. There's a little more knowledge of mechanics or something. Excuse me, I don't know what else would come in there.

Y: Yeah. And uh, uh, you said dyeing, dye house was, you know, you learned about chemistry and uh (--)

E: Well I had to know something about chemistry, because it involved chemistry. It didn't have to be a full chemist. Now every mill would have a chemist office, (Y: Yeah) with, with, with a laboratory. And we'd, they would do our chemistry work part I would say. But you see, in dyeing you had to learn the different kind of, kind of dyeing. Certain, certain dyes wouldn't go on without a [modent?]. A [modent?] as an inorganic substance that would. You see dyeing is a mixture of inorganic, with organic. And they make a color link, and the color link is put on the fabric. So you would uh, what do I want to say. You would put the, you'd put the modern, the inorganic substance on first, one process, and then that was, that stuck to the cloth. And then you put on your organic dyestuff and that adhered to the inorganic substance, and you made a color link. But in the years there isn't so much of that done. That was too long for the current speed. So now most of the dyes can go on directly. You don't have to put on (--) They put them, they might mix them together. When they're making the dyestuff they might have that inorganic, and organic together. You have to choose the right one, and it took some knowledge and some skill.

Y: Yeah, but the ordinary worker, he did not need to know all of these uh, (--)

E: No, no, he didn't. He was, he had to put the, we made the dye, and he boiled it.

Y: He took it out or whatever?

E: He boiled it, and he had to bail it out with a pail into a strainer. And of course those things have been improved too. They don't always do that. They siphon it out too. You just siphoned it out instead of baling. It's part of your [unclear] you were interested in. What's the difference over the years? Well that's one of the difference.

Y: Yeah. Was it dangerous somehow, the chemicals? I mean if you would uh, (--)

E: Not necessarily. We weren't particularly dangerous. No. No, we weren't, we could (--) I've seen men get scalded, you know, with hot water and things, but it wasn't particularly dangerous. See, we didn't, in our dye house, woolen worsted, we weren't involved with some the stronger chemicals. We were in a small way, but concentrated they would be dangerous. For instance, if a man would fall into a kettle of caustic he wouldn't last long. They'd take his bones and everything. You know, now acid wouldn't be that, it would kill him maybe, but it wouldn't disintegrate him completely. Uh, you could take, you know, seersucker, you know what a seersucker is? It's a rough fabric.

Y: Rough fabric, okay.

E: Well they, they would run that fabric through a set of rolls with caustic soda, and that would shrink the part that was impregnated. And that would make a puffed up, but orderly, regularly it was done on purpose. But we weren't, in my business we could, we use caustic, but not, and they used caustic [unclear]. You see, now my mother used to make her own soap. There's another advance. And the big soap company, we had a big soap company here. They made soap and they'd go around in a cart, ring a bell, and every house wife would bring their bacon fat, cuts from steaks, they'd bring them out. They'd bring them in a pot full to get a piece of soap. (Y: Yeah) And, and they employed a strong chemical there. Lye, and that made it soap. Well that's what your soap is when you wash your hands. They made it out of a strong, alkalized like. There was alkalide. And there was always enough left of that alkalide to combine with the dirt on your hands. The fat, the grease. And then that's, just a little surplus in the mixture. That's how you washed yourself. It would combine with the grease and the soap, and the dirt, and it would wash away.

Y: Yesterday you said there were big belts, also in dye house?

E: Oh yes.

Y: What was, why I quite, I did not understand why those belts were, were in dye house. I mean how did you use them? (E: Well (--)

Y: I thought they were big kettles and then uh (--)

E: But you had a big, uh, uh, (--)

Y: Can you tell me the change? You said, you know, when I show you the picture, you said that is before my time. So the men uh, putting the (E: the dye, yeah, yeah, yeah), with his hands. Where is this thing?

E: Yes, I know what you mean?

Y: Yeah, how did it, how did it uh, change? How did it change?

E: They did them manually, you see?

Y: Here, um, yeah.

E: Yeah. And I suppose in the beginning they just stirred it up. The wool was in there, and they stirred up this boiling (--) And if you had a kettle on your stove, and you'd stir it. (Y: Right) and these were stirring them. (Y: Right) But today (--)

Y: If you don't stir them evenly, then you don't get the uh, even color.

E: That's right. That's right. You still can get uneven too, but they have them improving, improving, improving. And sometimes they had (--)

Y: How did it look later? You said something, there was mechanic that was like a mixer. Men did not need to do that manually, but it was uh (--)

E: No, that's right. Well in this case they were making it and mixing it here. Now today you'd put that in a barrel maybe. And you put a mixer, like you have a mixer in the kitchen. And you'd mix up the dye. And then you'd push it, you'd push it through the kettle here, and bale it out with pails from the barrel into the kettle. Now he's making it here by hand, see? (Y: yeah) And, now, that was a great advance for us. In our industry I saw that in my time yet. We had spools. (Y: umhm) You know what a spool is? Well we had spools that high from the floor, with a barrel that big. All perforated. Holes in the core of that spool. And then the machinery, the belts you might say, would run a pulley that would give that velocity and pressure and push the dye through the perforations to dye that wool. You know yourself, some of that big soft wool. It was wrapped around there. And now before that, before that we made big skeins of that wool like I showed you, the big pieces, we'd put that in skeins. And we'd hang it on a great wheel that had fixtures on it that we could, that would accommodate this wool. The wool would, was wound up in skeins. And then we'd put that on, between two sticks. One stick on the outside, and one stick inside. And that whole frame would move through the dye. See? Slow. couldn't move too fast. If it did it would felt. If you leave it in too long, excessive boiling would cause felt, and that wouldn't be good. But now you say the belts. Every room had a, now we had a, we had a special room outside of the, all the moisture and the steam in the dye house. We, we had our motors, electricity. And motors don't like steam and moisture. So we had them in a special room. And they had the belt, big belt. They had a, they had a pulley. Your motor was here, and out here came an extension to accommodate a belt this wide. What did they call it? But anyway, and that belt would run, would go on to another belt up on the ceiling. And that, that belt was attached to a long shaft of iron. And on this shaft were all kinds of pulleys. [phone rings]

Y: Okay. We were talking about the belts, and you are explaining why they were there.

E: You see, yeah. You see today, and a little motor on every machine maybe you might say. (Y: Uh huh) In those days you had these big motors. (Y: Uh huh) It was very fascinating the uh, engine rooms, well it ain't just right, but they'd have an area almost the size of this house. High ceiling. And they'd have engines in there that would produce a lot of power, and it was transferred to the factory. Not entirely, but. And they were, they were polished up like I

suppose, like the sailors polish up the ship. And they'd [unclear] one of these in. We called Miles Standish. Another one we called John Alden. Another one we called Priscilla. Big brass. And they took pride in, and they(--). Now I don't know anything about engineering, but they, they must have provided a lot of the power in the factory. They made their own power you might say. A power house, that's the word I'm looking for. It was the power house. Called the power house. And uh (--) I think I'm, I might be a little allergic to (--)

Y: I hope you are not allergic to me.

E: No. [clears nose] No, I get it [unclear] and all at once I'm all cleared out.

Y: Yeah.

E: So these belts would be maybe that wide. They had (--)

Y: Now what uh, what wide is this? One foot?

E: Oh, more than a foot sometimes.

Y: Because you are showing and the tape doesn't see it. You know, you say that wide.

E: No, no. Good idea. Okay, well they were, of course you had a big motor. These motors were sometimes as high as a man's head. A motor. You're used to little motors, you know? But the big motor, and as a kid I got, I was afraid of him. I'd, I'd be starting at sixteen, seventeen years old. And I'd be in the dye house. And you had to start this motor in the morning to give the power to the whole dye house. And sometimes it wouldn't work just right. It would be a flash. And I might start that motor for a hole year successfully. And sometimes it wouldn't work. And I'd be brought in and blamed for it. Didn't do it right. You know, it was unfair. But maybe I was over sensitive. And I, I was afraid of it. I was afraid to start the motor. [Unclear] And that motor had a big belt. It might be twenty, thirty feel long.

Y: Twenty, thirty. It could be thirty. And that would give motion. That one part of the belt was on this part that protruded from the, from the motor, the big motor. And then that started. That was on a shaft. A shaft of iron, you know, where they attached all of the motors to it. And that would be spread out maybe, maybe a hundred feet shaft. And on the shaft were all kinds of these pulleys. (Y: Yeah) And those pulleys had a tight pulley, and a loose pulley. You don't do that today. They have a motor for every frame. I guess every weave, loom almost, not completely, but. And when you put it on the loose pulley, the machine would stop. And thankfully it was in action. And one belt gave the power from the powerhouse, and that wen on to pulleys on the shaft, and that ran a shaft with maybe twenty five, or thirty pulleys. And each pulley ran a machine. And they had, to come down you want to stop it, you put it on a loose pulley. It wouldn't be idling they call it, [unclear].

Y: Yeah. And you said yesterday sometimes those belts broke and killed people, or (--)

E: I've known of a couple of people that were killed by them. You know, there were these

things going.

Y: In your department? In your, did you know those people?

E: No, other departments.

Y: Other departments, yeah.

E: Our belt was really, we were in a separate room separated because of the steam. Other departments, where that wasn't true, they uh, they didn't have to have them closed in. They were already out in the open. And if a belt broke, well the land knows where it would go. It was going at a tremendous speed, a good side. It would break a machine.

Y: Yeah. And uh, where did you um, dump those dye?

E: It all went into the river.

Y: River? Merrimack River?

E: We didn't, we didn't try to reclaim the [unclear]. The plastics is different, but in the, in the (--
)

Y: In the textile industry you took uh, (--)

E: Textiles, it was in the uh (--) It was in a solution. The dye was in a body of water. And when the kettle was finished, you pulled the plug and it would start feeding water in it, and the dyestuff would drain out. The dye solution where the most part had been taken out and put on the cloth. But the color was there yet, you see? On that you simply pull the plug and it went into the river.

Y: Yeah. So everywhere must have looked colorful also after.

E: There were times. Even soap. You see, when they got rid of washing they pulled the plug and the soap went into the river too.

Y: Yeah. I wonder how it affected fish and other things?

E: It no doubt affected them to a great extent. You see, now they're talking about salmon coming up, and different kind of fish. And I think our sewerage plant was sixty million dollars. You know the one North Andover? (Y: Umhm) In fact one of my boys has charge of one of those plants. He's a grown man now. But they run twenty-four hours a day. And the sludge you get out of there is tremendous, and then they burn, they burn a great deal of their sludge. It comes off in, it comes off maybe that thick a blanket. Maybe uh, twenty foot apron, it comes off on a twenty foot apron. And the sludge is deposited in a blanket like a piece of felt you might say, welded together. Welded, but presses together. And then that, that, a lot of that is burned. So anyway, we're a lot freer than we used to be of dyestuffs. You know, they're going into the,

we don't have any dye houses in Lawrence. We used to have the biggest in the world. Now we have nothing. I don't believe there's a loom in Lawrence.

Y: Fred Arold told me that he worked in dye house for a short while. Did you know that? In the Wood Mill.

E: I didn't know that.

Y: And he said he was so colored every where, when he went home his grandmother put him in there, and washed him firmly to take all the (--)

E: Is that a fact? That's interesting! I never knew that part of it.

Y: I washed him firmly every where. And do you know Harold Adams? He worked in the Wood Mill dye house? He's, he probably worked with you, under you, or whatever.

E: Could have been.

Y: Yeah. He's in the newspaper. Um, (--)

E: Could be. Well a lot of, you know, these boys that went to school, they wanted summer jobs, and no doubt they worked in the dye house. They worked everywhere. (Y: Yeah) I used to, I went to work at six of course, and I'd have three or four of my boys, they used to be scouts. They'd come and pick me up in the morning, we'd walk to work together. That was quite touching, you know?

Y: In the morning?

E: Yeah! They worked, they worked for me during the summer, see.

Y: Oh, I see. Yeah.

E: And so they knew, we knew each other of course, well. And they'd pick me up in the morning, we'd walk to work together, in the morning. (Y: Yeah) That was interesting.

Y: Yeah.

E: And then some of them stayed in the dye house and they became dyers. I trained some of them to become dyers. And they went out. They always had more money than I did. See, I was brought up in the American Woolen Company, and you know, the Prophet in his own town isn't respected. No, I don't say respected. But we weren't getting the first money, big money. We, we liked it there, we lived there, we were with the family. And we never got any, we got pretty good. Well during the ward (--)

Y: Which one, first? Second?

E: It has to be the second, yeah. You know, those menders were getting \$150.00 a week. And I as boss dyer was getting \$150.00 a week. You see? It was a matter of, well I was used to it and I'd been there all my life. And they kind of forgot me. Well they only can give you money unless you ask for it. Figure, well they want to unclear the unions. But the unions brought the money back for all, for all of us. Sometimes they were unreasonable. But as I said before. Whoever had the ascendancy abused it. They're all human. When the union had it they, they weren't looking for equality, or the golden rule, they were going to get what they could get while they were at it. The heck with Christian application. clears nose

Y: So um, were you proud in all of the colorful things? You produced them.

E: I don't know. I don't like to use the words proud. I don't think I was every proud. Well in a sense. I know what you mean? (Y: Umhm) Proud in the sense of satisfaction, yes.

Y: And did you see the end product? I mean you were the, one of the first people who, you know, first the wool sorter, and this and that. And then, you were one of the first people (--)

E: There's two different products. Now you see, the gray yarns we showed, you know, different processes, that had to start first in the wool. We dyed the wool black, mix it with white, and made a blend, made it gray, see? Now that went all the way through the factory as a gray. Other times they'd take the white, the white (Y: material) threads, and weave it white. And we died that as a white piece, eighty yards long, sixteen pieces, all in one kettle. We died sixteen pieces, eighty yards long each, and we dyed them in a white cloth. So there was two different ways. Sometimes we started them. Now the khaki, you had to dye khaki. It wasn't just one color of khaki. We had different shades of khaki. Some darker and lighter, and we put them together. And we had to till we get the right shade. We'd weigh them up on scales, small scales. Small amount of wool. And we'd weigh up by percentage. And then it was a little too dark, well we'd take out a little dark, put in a little light. You see, like that. It wasn't that easy, but that's the essentially what happened. And we had the right shade. We'd sent it to the combing room. In the combing room, had to take those strands of wool, and depending on the percentage, depending on how, how much they had to pull them out, draw them out they called it, it was drawing. The drawing room was a whole big room there. Five, six steps to get it from heavy wool to thread. And so anyway.

Y: But did you see the fabric at the end?

E: Oh yes!

Y: Did you go and see how it, what became after uh (--)

E: Yes, you see, if it was washed and sheared, one of the process was the girls would take the knots from the back of the cloth to the front. So where they were sheared, they would cut them off. You know what a shear, a knife, a rosary, and it would cut (--)

End of side II